



# Accelerating Broadband Use and Impacts in Kentucky

Adoption, Meaningful Use, and Economic Development



COMMONWEALTH OFFICE  
OF BROADBAND OUTREACH  
AND DEVELOPMENT

*Promoting a 21st century economy*

# Objectives of Presentation




- Shared understanding of the importance of Internet utilization
- Insight into Internet utilization in Kentucky
- Discuss opportunity for improved data collection and analysis in Q1, 2012
- Identify how Kentucky stakeholders can participate and benefit

## SNG's *Broadband Lifecycle Approach*<sup>®</sup>





# Turning Internet Potential Into Reality: 3 Stages

## Connectivity and Affordability



-  availability
-  reliability
-  speed

## Adoption

-  businesses
-  households



## Maximizing Utilization

-  drive usage and benefits
-  link gaps to opportunities

# Why Drive Adoption and Use?

## Broadband retains and attracts population and businesses

Businesses and organizations in 2 States reported that 19.5% of new jobs created in 2010 were attributed to use of the Internet

In these 2 States, 27.7% of households and 75% of self-employed individuals have a home-based business



The smaller the business, the bigger the Internet's impact on jobs and revenues

Over 50% of businesses said broadband is essential in selection of their location

# The Move to Internet Enabled Jobs

Job gains and losses among 1,721 businesses and organizations  
in two states in 2009/2010

Size of Company by Number of Employees	New FT+PT Jobs	Lost FT+PT Jobs	Net Jobs FT+PT	Net Jobs Internet	% of Internet Jobs Created	% of all employees	Total Employees FT+PT
<b>1 to 49</b>	<b>3,652</b>	<b>3,932</b>	<b>-280</b>	<b>721</b>	30.1%	6.8%	41,881
<b>50 - 99</b>	<b>1,178</b>	<b>2,049</b>	<b>-871</b>	<b>206</b>	8.6%	4.7%	29,098
<b>100 - 249</b>	<b>3,097</b>	<b>2,823</b>	<b>274</b>	<b>419</b>	17.5%	9.0%	55,510
<b>250 - 499</b>	<b>1,825</b>	<b>2,108</b>	<b>-283</b>	<b>354</b>	14.8%	9.2%	56,357
<b>500 +</b>	<b>6,925</b>	<b>7,285</b>	<b>-360</b>	<b>694</b>	29.0%	70.3%	432,841
<b>Totals</b>	<b>16,677</b>	<b>18,197</b>	<b>-1,520</b>	<b>2,394</b>	100.0%	100.0%	615,687





# How to Measure Utilization?

## Uncover current Internet use and benchmark against peers

- 17 e-solutions\* by organizations
- 30 e-solutions\* by households

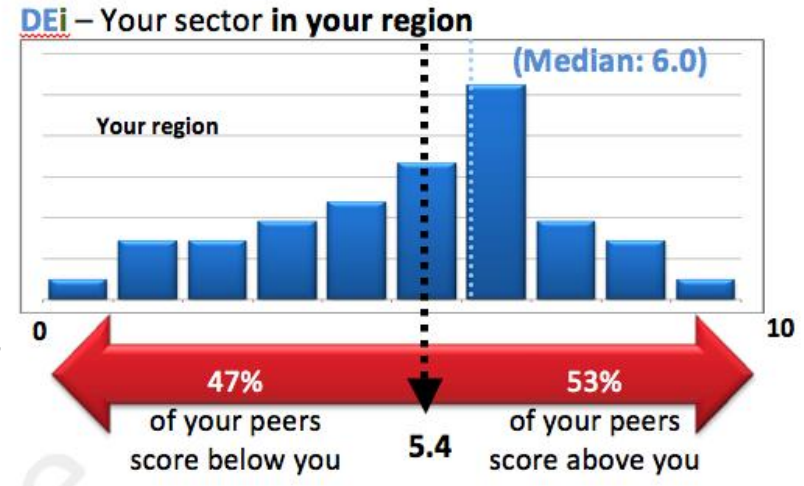
Utilization data collected in 2012 directly from from **2,073** businesses and organizations and **1,454** households across Kentucky.

Results shown use SNG's **Digital Economy index (DEi)**, a composite score that goes up to 10 to reflect broadband use.

**Ranking process  
by DEi score**

\*Internet-enabled applications and processes

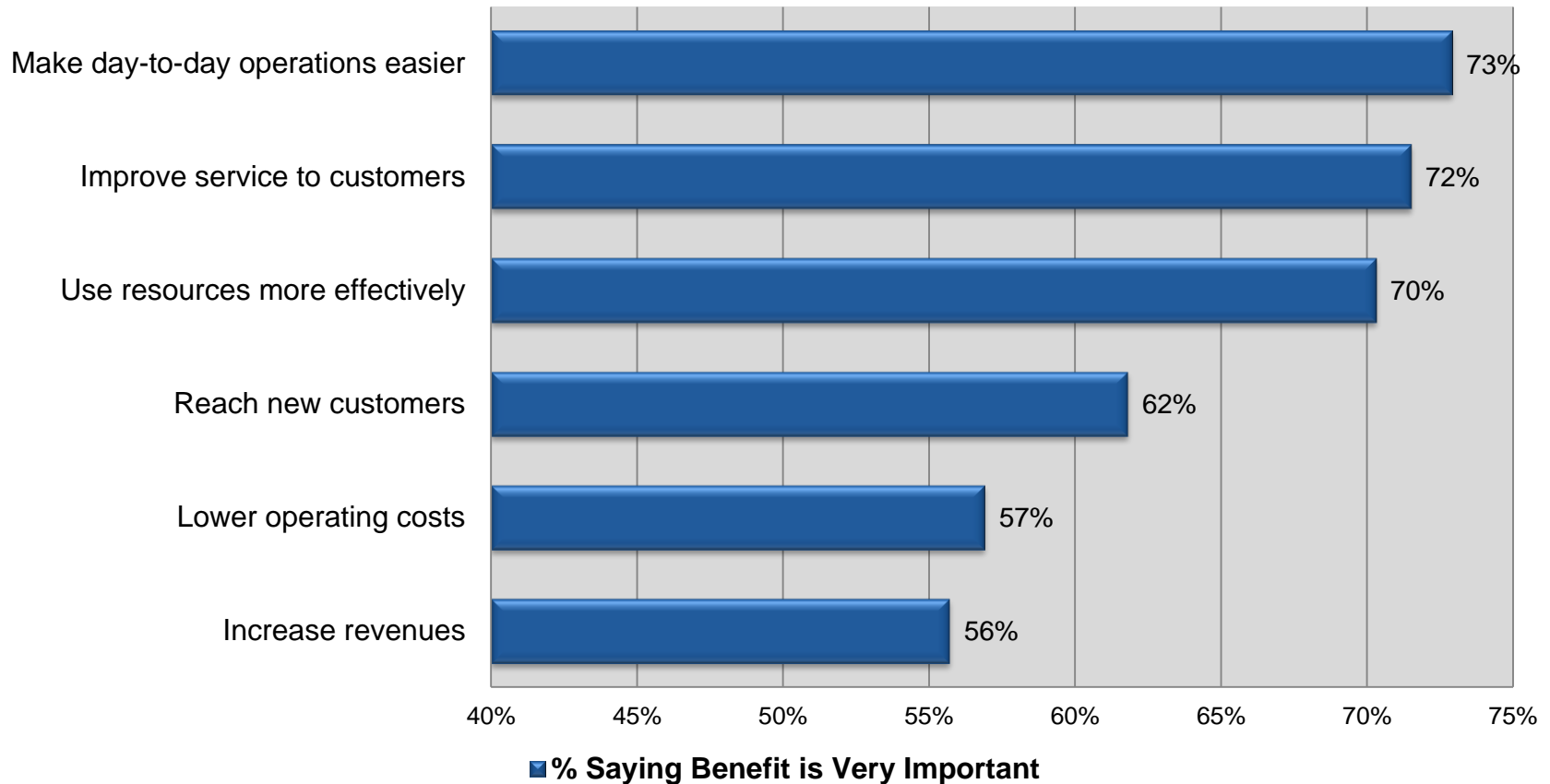
**Your score: 5.4**



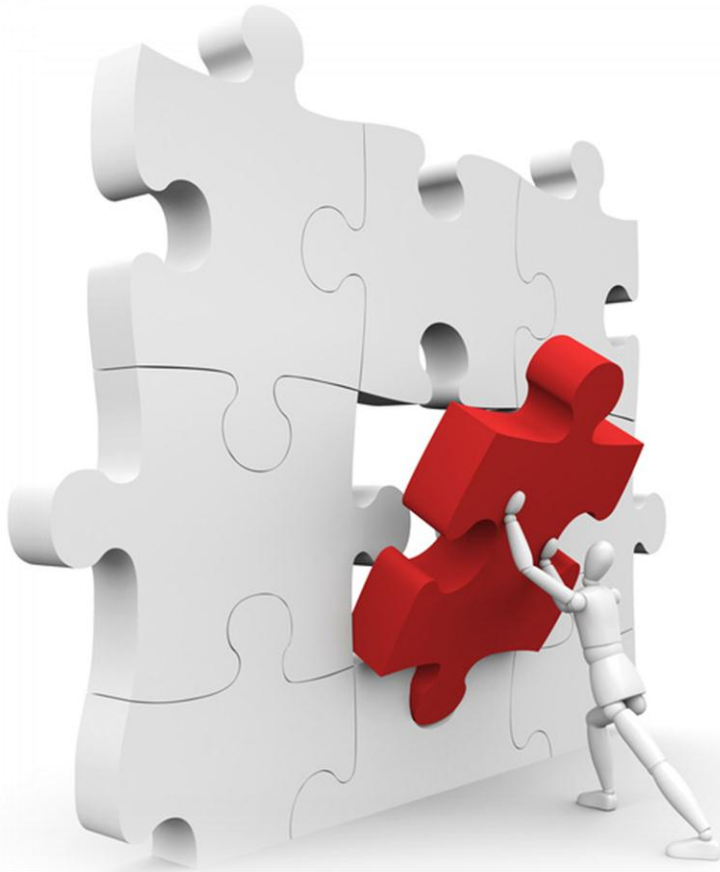
Highest
2
3
4
5
6
Lowest
Insufficient Data

# The Importance of Utilization

Six top benefits of Internet reported by businesses and organizations are:







**Regional and community  
impacts include  
job creation and retention  
during shift  
to a knowledge economy**

*Utilization of the Internet varies greatly among businesses, organizations and households, with major impacts on productivity and competitiveness.*

# Not all regions benefit equally

Region	Rank	Average DEi Score	Difference from Average	Sample size
Bluegrass	1	6.39	0.32	1,083
South	2	5.84	-0.23	321
West	3	5.83	-0.24	375
East	4	5.38	-0.69	271
State Average		6.07		2,050

## Understand the competitiveness and relative performance of a region by local economic sectors

Major Industry Sector	Statewide	Bluegrass	East	South	West
Information	7.32	7.63	6.40	7.64	7.29
Finance & Insurance	6.71	7.30	6.57	6.20	5.75
Wholesale Trade	6.69	7.23		6.53	6.13
Manufacturing / Processing	6.48	6.74	6.34	6.24	5.75
Educational Services	6.36	6.19		6.75	5.75
Professional & Technical Services	6.31	6.84	5.53	5.47	5.48
Other services (exc. public admin)	6.20	6.63	4.99	5.91	6.17
Retail Trade	6.11	6.28	5.83	4.93	6.75
Construction	5.84	6.07		5.83	5.88
Health Care & Social Assistance	5.48	6.12	4.58	5.20	5.03
Public Administration	4.73	4.74	3.84	5.13	4.95



## ***Each region must develop its own strategy and initiatives based on its own characteristics, values and priorities***

Each region requires strategies and initiatives that address its unique situation. The Commonwealth can provide support, but social and economic developments are essentially local and regional in nature.



### ***Focus on high opportunity industry sectors within each region rather than undertaking broad but untargeted initiatives***

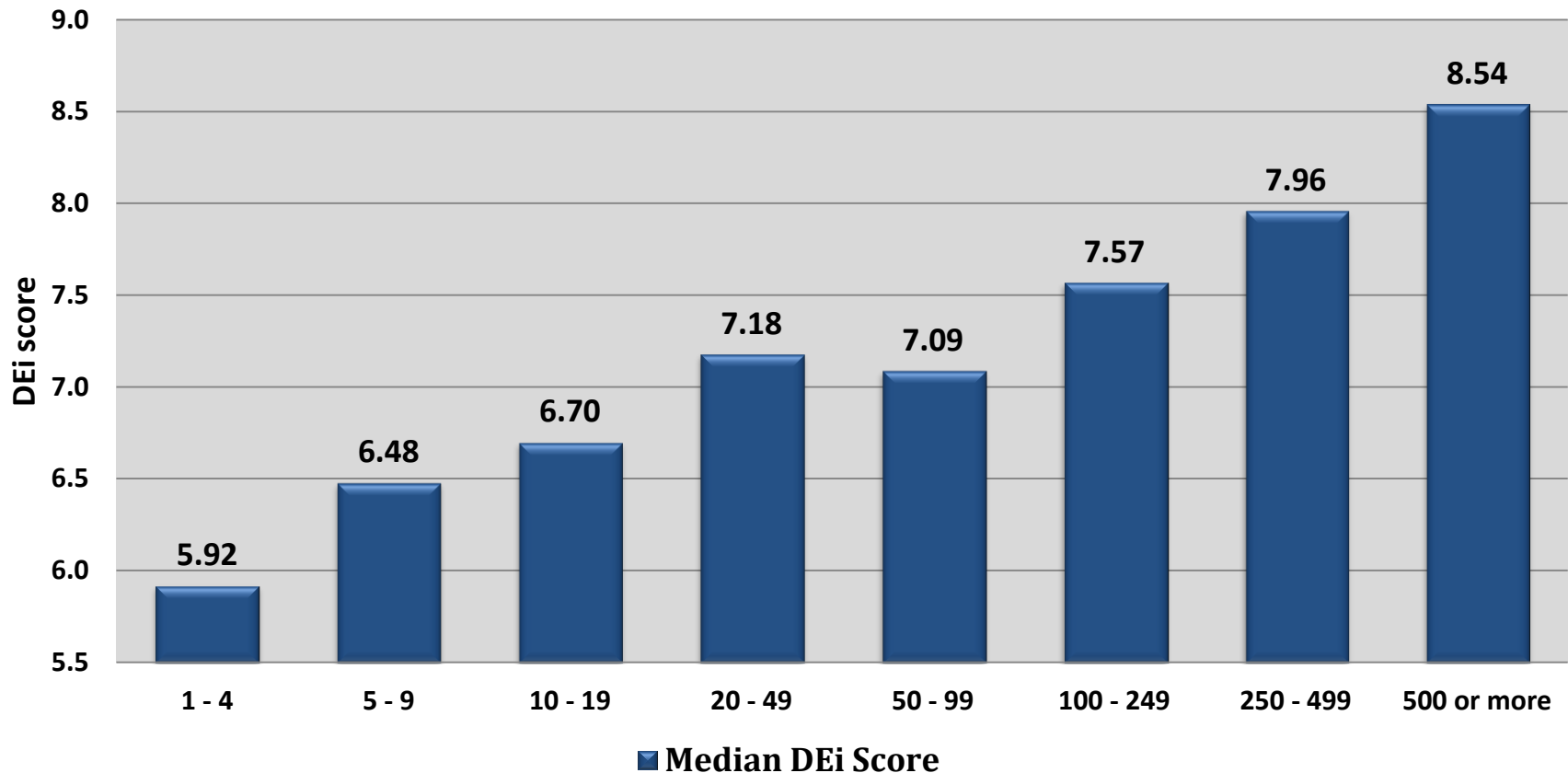
Prioritizing industry sectors and other economic groups must be done within a regional context. In general, focus should be on industry sectors that make the largest contribution to the economy and that have the greatest growth potential.



# Utilization Increases with Size of Organization or Business

**Smaller businesses and organizations have difficulty in adopting complex Internet applications and processes**

**Utilization (DEi) Increases with Size of Organization**



# SMEs make up the vast majority of businesses and organizations

Employment Range	Bluegrass	East	South	West	Statewide
1 to 19	83.8%	86.9%	86.6%	86.4%	85.0%
20 to 49	10.0%	8.7%	8.7%	8.8%	9.5%
50 to 99	3.4%	2.3%	2.4%	2.5%	3.0%
100 to 499	2.6%	1.9%	2.0%	2.0%	2.3%
500 or more	0.3%	0.2%	0.3%	0.2%	0.2%

**While SMEs may have lower utilization, but they are the most effective at leveraging the Internet to create jobs**



## Prioritize Small Business

*Focus on the small-medium enterprise segment, especially 1-49 employees, to increase Internet utilization, thereby driving competitiveness, revenues and job creation.*

*Small to medium sized organizations should be a focus for the following reasons:*

- *Largest number of establishments (95%) and significant employment (43%)*
- *Lowest utilization level compared to larger employment segments*
- *Dynamic engines for employment growth, especially through use of the Internet*
- *Least capacity and expertise to adopt more sophisticated Internet applications*





## *Switching from Who to Prioritize to What Areas to Prioritize*

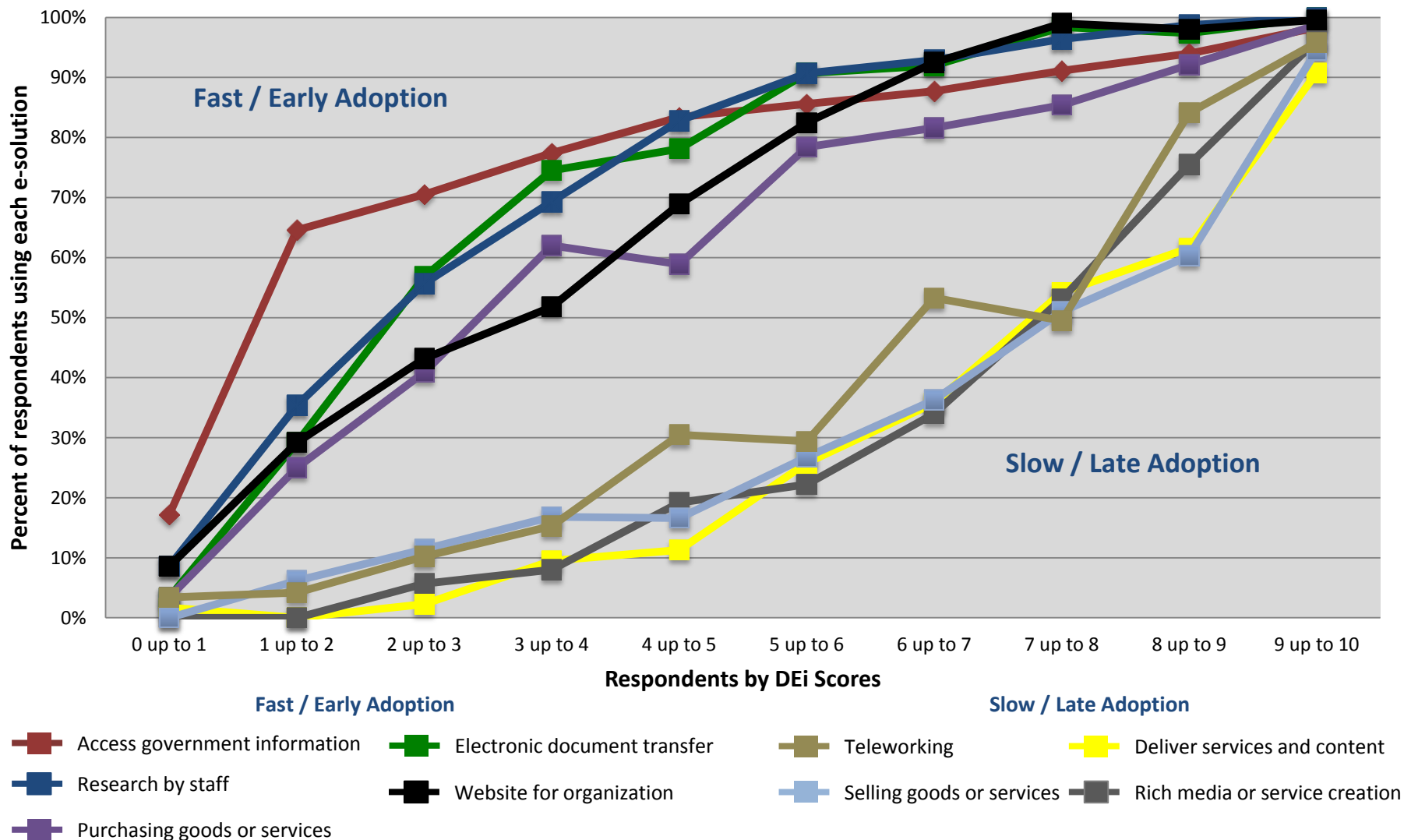
**Not all Internet applications and processes are adopted with equal ease or speed**

Quick to adopt	Slow to adopt
Access government information	Teleworking
Electronic document transfer	Rich media or service creation
Purchasing Goods and Services	Selling goods or services
Research by staff	Deliver services or content
Web site	

\*Rich media describes Web pages that use advanced technology such as streaming video, downloaded programs that interact instantly with the user for advertising.

# The Adoption Process for e-Solutions

## Relationship Between DEi and Specific Internet Uses

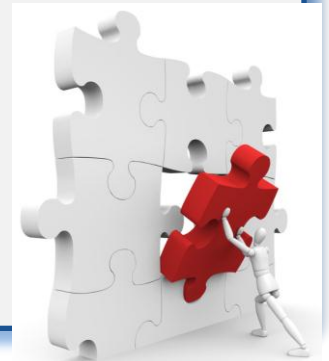




## ***Focus On Critical e-Solutions***

**Initiatives aimed at increasing utilization among small to medium enterprises should focus on the following 10 categories:**




- 1. Delivery of services and content*
- 2. Rich media or service creation*
- 3. Teleworking*
- 4. Staff training and skills development*
- 5. Advertising and promotion*
- 6. Social networking*
- 7. Government transactions*
- 8. Customer service and support*
- 9. Selling goods or services*
- 10. Supplier communication and coordination*



*Household broadband adoption  
depends on awareness and skills  
in utilization of e-solutions  
– it's about personalizing value.*

## Internet patterns of use depend on awareness

### In the United States:

-  66% of households have broadband\*
-  2/3 of Americans feel that broadband at home is important for finding out about jobs or learning career skills\*
-  Yet, 48% of non-Internet users do not go online because they do not see the value\*



**Availability ≠ Adoption ≠ Utilization**

# Regional differences in Household Utilization

Region	Rank	Average DEI Score	Difference from Average	# Households
Bluegrass	1	5.39	0.24	526
West	2	5.14	-0.01	381
South	3	4.95	-0.20	286
East	4	4.92	-0.23	261
Kentucky		5.15		1,454



# Regional Dimensions on Household Productivity

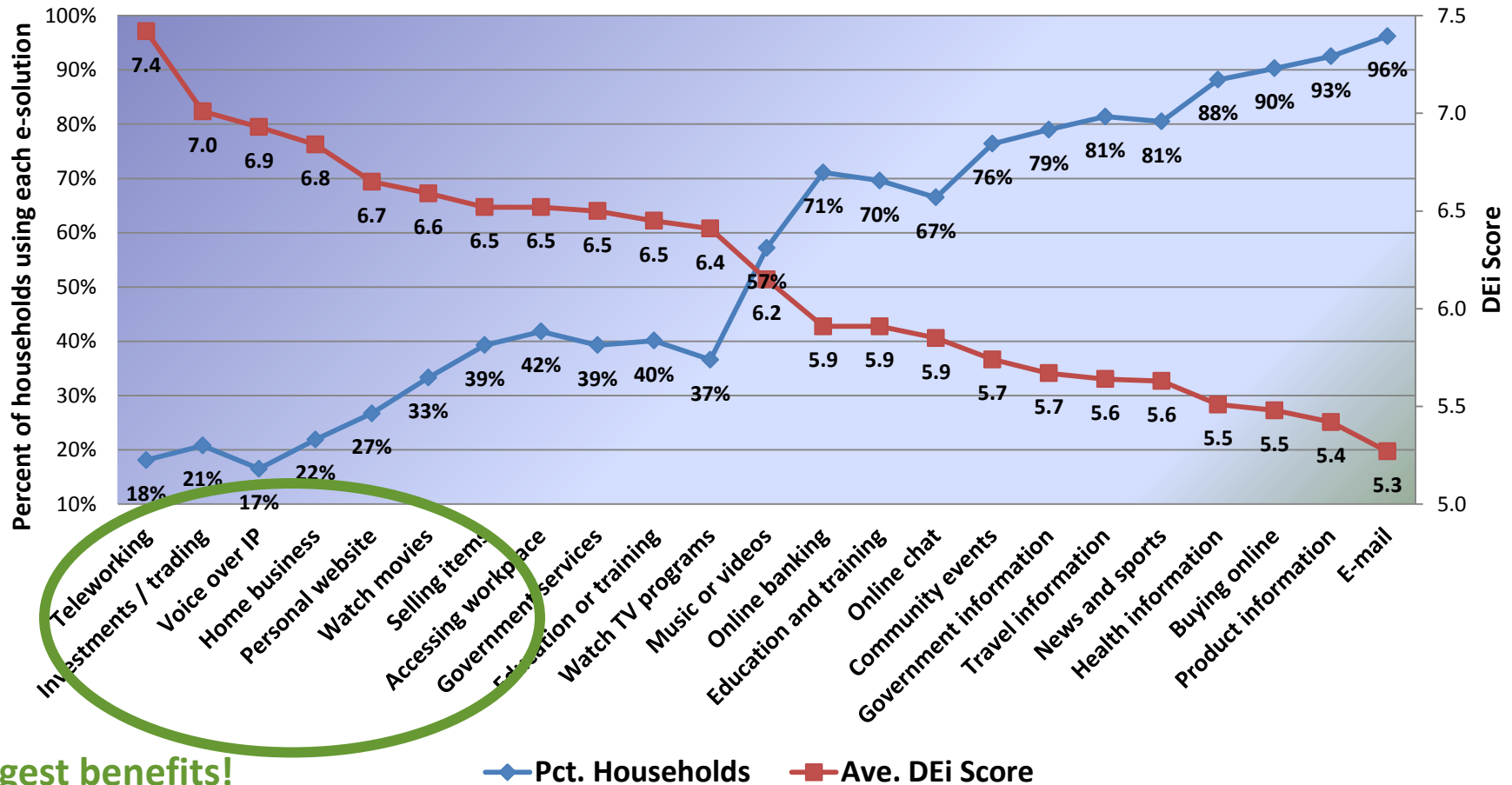
Productivity Category	Bluegrass	East	South	West
Accessing workplace	49.2%	36.8%	39.7%	36.8%
Home business	28.1%	16.5%	19.4%	19.3%
Teleworking	23.6%	14.7%	14.0%	16.0%
Education or training courses	42.9%	38.1%	38.4%	39.0%

**Urban areas use the Internet more for productivity – Kentucky patterns in home-based businesses differ from other States**

# The Digital Divide Impacts Household Earning Power

Increasing Percentage of Households Using

Relationship between DEi Score and Frequency of Use



**Biggest benefits!**

Increasing Level of Sophistication and Higher DEi

# The Digital Divide in Utilization

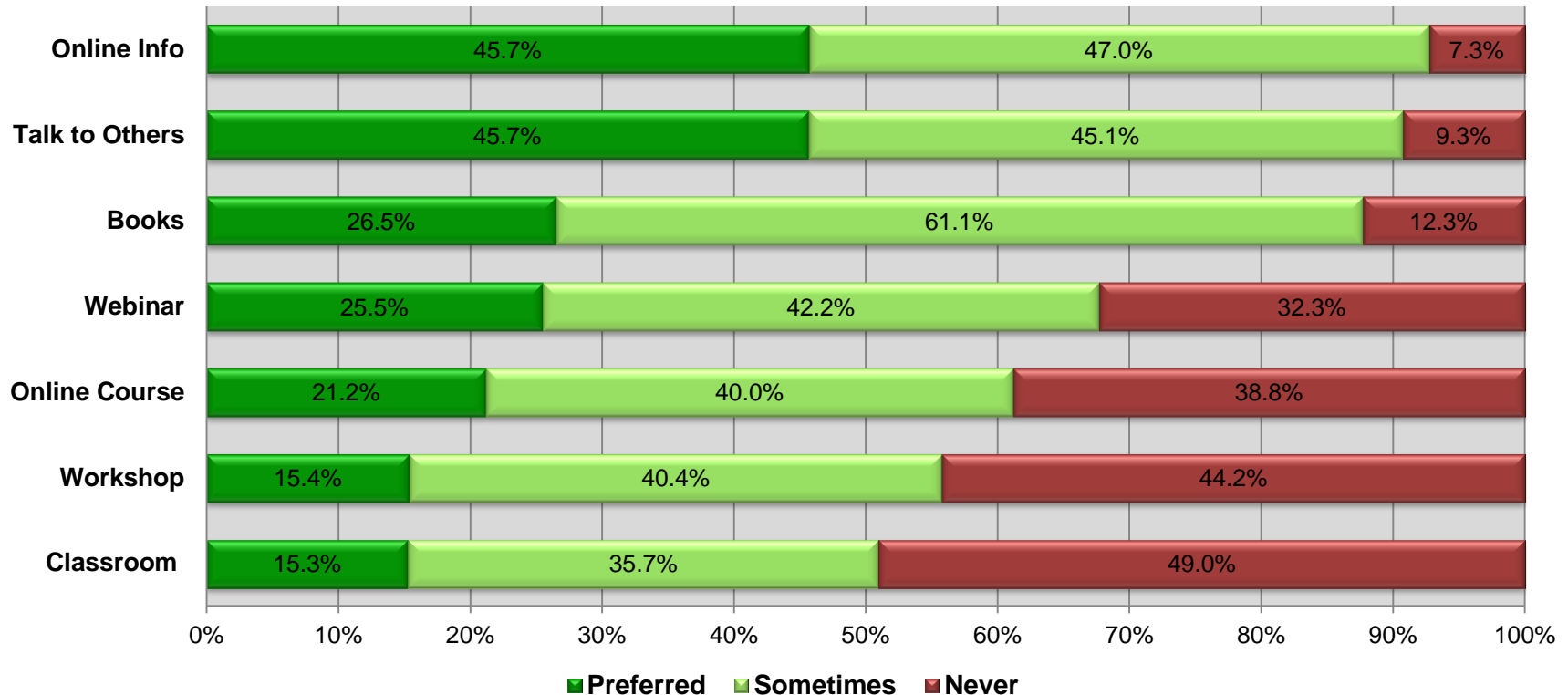
## Age and income determinants in use of e-solutions by households

 The younger and the richer you are, the more you use

 The older and the poorer you are, the less you use





Respondent Age	Household Income			
	Less than \$30,000	\$30,000 to \$49,999	\$50,000 to \$100,000	More than \$100,000
18 to 34 years	5.09	5.47	5.79	6.84
35 to 54 years	4.62	5.20	5.72	6.75
55 to 64 years	4.58	4.85	5.50	6.31
65 years and over	3.32	4.45	5.23	4.75

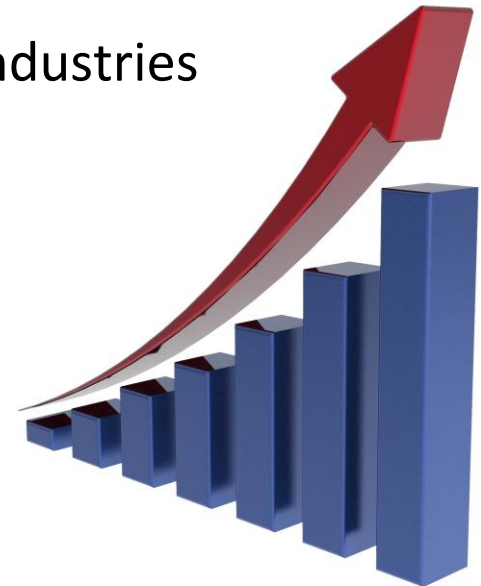
## Preferred Learning Method for Seniors







**Target the population that under-utilizes  
and know how to reach them**

To propel innovation and economic benefits, the Kentucky Internet benchmarking initiative for 2012 will add the following areas:

-  Impacts (benefits, revenues, job creation)
-  Home based businesses
-  Customization of reports for regions and industries
-  Suggestions?






**Stakeholder participation is key to maximizing regional, local, and industry specific data. They will also become the prime users of the resulting data and analysis.**




-  Understand where investment can have the greatest impact by identifying needs, gaps, and demand for broadband
-  Improve local productivity and competitiveness by benchmarking against peers and industry sector leaders, within and outside your region
-  Promote awareness, drive utilization, and leverage assets to maximize socio-economic benefits
-  Develop regional and sectoral strategies based on a customized analysis of the current patterns of Internet use.



## Survey Deployment

-  Letters of encouragement to constituents
-  Contacts lists (e-mail addresses)
-  Co-sponsorship for key sectors

## Planning

-  Identify strategic priorities for data collection and analysis
-  Participate in regional planning efforts
-  Utilize data and analysis





 Questions, comments

 Setting priorities for data collection

- What are high priority issues for broadband utilization?
- What additional utilization data would be of high value.
- Identify opportunities for collaboration on collection and use of data and analysis.





## Let's connect !

**Derek Murphy**  
**Strategic Networks Group, Inc.**  
+ 1.250.226-7182  
[dmurphy@sngroup.com](mailto:dmurphy@sngroup.com)



COMMONWEALTH OFFICE  
OF BROADBAND OUTREACH  
AND DEVELOPMENT  
*Promoting a 21st century economy*